# Disaster Preparedness and Management

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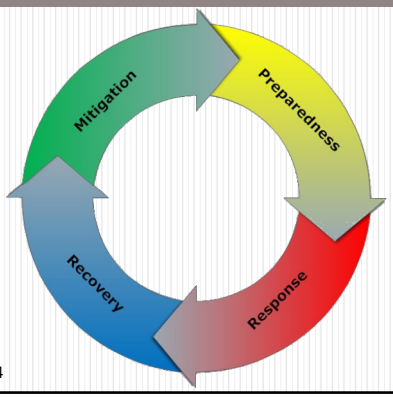



## Mitigation

Mitigation is the effort to reduce loss of life and property by lessening the impact of disasters. For mitigation to be effective, action must be taken before disaster strikes to reduce human and financial consequences later. Disasters can happen at any time, anywhere, and if unprepared, consequences can be fatal. Mitigation can protect critical community facilities, reduce liability exposure, and minimize community disruption.

**Examples of mitigation include:**

- Adopting and enforcing updated building code provisions to reduce earthquake damage risk
- Designing a “natural runoff” or “zero discharge” policy for storm water in subdivision design to reduce flooding risk
- Creating a plan to implement reinforcement measures in high-risk areas to prevent landslide risk

## Preparedness


Preparedness involves activities that are done before a disaster, including training, planning, community education, and exercises. The county should encourage cities and towns, businesses, and citizens to have their own emergency plans and supplies. A community response and approach to emergency preparedness should also be encouraged.

**Examples of preparedness include:**

- Designing a disaster response plan for the county
- Holding community forums to inform on disaster preparedness and safety
- Holding forums to promote and encourage disaster preparedness within neighborhoods

## Response

Natural disasters, such as floods, involve contaminated flood water and debris that can produce a number of hazards. Major fires produce smoke, toxic gases, and the possibility of structural collapse. Hazardous material events usually involve toxic materials that can cause numerous types of health hazards. Terrorist threats can involve chemical, biological, radiological, nuclear, or explosive devices. Major earthquakes can impact nearly every aspect of society.

**General response priorities include:**

1. Saving lives
2. Stabilizing the incident
3. Protecting & restoring critical systems
4. Reducing property damage
5. Protecting the environment

## Recovery

Governments have the primary responsibility for protecting its residents from disasters, and helping them to recover when disaster strikes. Agencies at all levels are key partners in the process, offering resources and programs that will help the community return to normal as quickly as possible.

Recovery involves the cleanup and restoration activities necessary to return the are to normal. Recovery is frequently the hardest phase of a disaster, and may continue for an extended period of time.

Recovery is financially, physically, and emotionally exhausting for all parties involved. Confusion or misinformation about relief programs can become a strenuous source of frustration for community members, as well as officials tasked with the recovery response. The continual relay of information to the public regarding recovery efforts is essential.

## Emergency Operations Plans


The most common type of plans are Emergency Operations Plans (EOP), which generally outline the basic parameters that an organization intends to follow. The EOP addresses the planned response to extraordinary emergency situations wrought by natural disasters, technological incidents, and national security emergencies that may affect the community.

There are a number of things the EOP is intended to do, including:

- Establishing the emergency management organization required to respond to and mitigate any significant emergency or disaster affecting the community
- Identifying the policies, responsibilities, and procedures required to protect the health and safety of the community, public and private property, and the environmental effects of natural and technological emergencies and disasters
- Establishing the operational concepts and procedures associated with field response to emergencies, the community's Emergency Operations Center (EOC) activities, and starting the recovery process

# Emergency Operations Plans


The EOP is also important in that it establishes the framework for implementing the National Incident Management System (NIMS).

The EOP is intended to facilitate multi-agency and multi-jurisdictional coordination in emergency operations, particularly between your county and other local governments, including special districts, cities, and State agencies.

The EOP is a concept of operations guide and planning reference. Departments and local agencies that have roles and responsibilities identified in the EOP are encouraged to develop emergency operations plans, detailed standard operating procedures (SOPs), and emergency response checklists based on the provisions of the EOP.

# Continuity of Government: The Federal Plan in Action

Dwight D. Eisenhower
34th President of the United States
(1953 – 1961)

Dating back to the Eisenhower Administration, the United States has maintained a plan for ensuring governmental operations continue should a cataclysmic event occur and incapacitate the standing leadership in Washington, D.C.

The plan, known internally as the COG, for "continuity of government", was established based on Cold War-era fears of a nuclear strike on Washington, originating from the Soviet Union or one of its allies.

## Continuity of Government: The Federal Plan in Action

Ronald Reagan
40th President of the United States
(1981 – 1989)

The modern era of federal continuity planning began under President Reagan.

On September 16, 1985, Regan signed National Security Decision Directive 188, Government Coordination for National Security Emergency Preparedness.

NSDD 188 assigned continuity planning responsibility to an interagency panel from the Defense, Treasury, and Justice Departments, as well as the Office of Management and Budget.

Additional directives — including Executive Order 12472, Assignment of National Security and Emergency Preparedness Telecommunications Functions — provided more detailed planning aspects under the Reagan Administration.

## Continuity of Government: The Federal Plan in Action

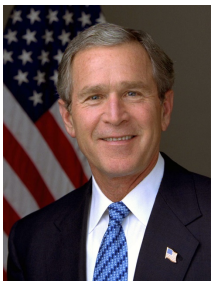
On November 16, 1988, Reagan signed Executive Order 12656, ordering every Cabinet-level department to define the defense and civilian needs essential to national survival in the event of a nuclear attack on Washington, including legal instruments necessary for succession to office and the emergency delegation of authority.

## Continuity of Government: The Federal Plan in Action

Rehearsed for decades as being implemented due to the Cold War turning hot, the COG was instead implemented "on the fly" within hours of the September 11, 2001 terrorist attacks.

Although US intelligence had no specific knowledge that al Qaeda had a portable nuclear weapon, the fear that the terrorist organization might be able to obtain one was thought to be real enough to justify the COG's implementation and expense, according to a participant of the plan in a 2002 report by the *Washington Post*.

## Continuity of Government: The Federal Plan in Action



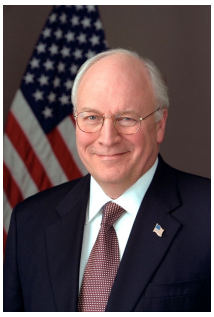
George W. Bush
43rd President of the United States
(2001 – 2009)

Following the September 11 attacks, President George W. Bush directed approximately 100 senior civilian managers to live and work secretly outside of Washington.

Those selected for the COG implementation were sent to live and work in primarily two highly secured, underground bunker locations, drawing from every Cabinet-level department, as well as some independent agencies.

The COG's first mission, in the event of a disabling blow to Washington, would be to prevent the collapse government and try to contain disruptions to the national food and water supplies, maintain civil order, energy and telecommunication networks, and other essential functions.

## Continuity of Government: The Federal Plan in Action



Richard B. Cheney
46th Vice President of the United States
(2001 – 2009)

For months after the 9/11 attacks, Vice President Dick Cheney was absent from Washington, keeping tabs on events from outside, secure locations. Cheney's estrangement from Washington ensured his survival should Bush fall victim to an attack on the nation's capitol, and ensured constitutional succession as outlined by the Twenty-fifth Amendment.

The officials directed to the bunker locations acted as a contingency plan to reconstitute the government, an administration-in-waiting to compliment Cheney should other cabinet officials be wiped out in the feared nuclear scenario in Washington.

## Continuity of Government: The Federal Plan in Action

Joseph W. Hagin II
Deputy Chief of Staff,
George W. Bush Administration
(2001 – 2008)

Regarding the potential of a nuclear attack on Washington and ensuring the continuity of government, Joseph Hagin said:

"We take this issue extraordinarily seriously, and are committed to doing as thorough a job as possible to ensure the ongoing operations of the federal government. In the case of the use of a weapon of mass destruction, the federal government would be able to do its job and continue to provide key services and respond."

## Continuity of Government: The Federal Plan in Action

On October 8, 2001, President Bush created the Office of Homeland Security with Executive Order 13228. Its initial responsibilities included reviewing "plans and preparations for ensuring the continuity of the Federal Government in the event of a terrorist attack that threatens the safety and security of the United States Government or its leadership."

The Office of Homeland Security evolved into the cabinet-level Department of Homeland Security when Bush signed the Homeland Security Act of 2002.

## Continuity of Government: The Federal Plan in Action

Barack Obama
44th President of the United States
(2009 – 2017)

Before Barack Obama was elected president, the Bush administration streamlined the emergency response process after what they viewed as erratic federal responses to 9/11 and Hurricane Katrina.

This included shrinking the number of personnel involved in bunker locations.

By the time the Obama administration took over in 2009, they had reviewed the Bush-era response plans, and left what they were given virtually intact.

## Continuity of Government: The Federal Plan in Action

Nick Shapiro
Former CIA Deputy Chief of Staff, Barack Obama Administration

Regarding the importance of the federal continuity of government plan, former White House spokesman Nick Shapiro said:

"Many components of government, within civilian and defense establishments, play an important support role to ensure that our constitutional from of government, and its civilian leadership, prevails even under the most catastrophic circumstances."

## Continuity of Government: The Federal Plan in Action

The military chain of command has long maintained redundant centers of communication and control which continuously operate, and are hardened against the severest of attacks.

The other branches of constitutional government, Congress and the judiciary, have their own separate continuity plans, but they do not operate like the executive COG plan implemented post-9/11.

USDA

Civilian agencies, like the US Department of Agriculture, have developed comparable contingency plans to ensure proper continuity of operations.

## Mitigation Plans


Mitigation plans take a more detailed look at hazards that may occur within a jurisdiction and identify strategies for reducing or eliminating the hazard(s).

Mitigation plans often contain prioritized projects or actions that should be implemented or completed.

Under Code of Federal Regulations 44, Emergency Management and Assistance, FEMA requires that jurisdictions have an adopted mitigation plan in order to be eligible for some forms of post-disaster funding. Having a mitigation plan will be key to securing these funds.

Most jurisdictions in Utah have an adopted mitigation plan.

## Mitigation Plans

"You should have a mitigation plan to understand your risk and have a course of action to reduce that risk. For every dollar that is spent in mitigation saves four dollars when a disaster strikes."

Brad Bartholomew,
Utah Department of Human Services

# Mitigation Plans

**Hazard Analysis** involves identifying the potential hazards in an area that may threaten your community and individually analyzing them to determine their level of threat. Hazard analysis determines the hazards that can occur, how often they're likely to occur, how severe the situation is likely to get, how the hazards are likely to affect the community, and how vulnerable the community is to a hazard.


Hazard analysis requires the completion of five steps:

1. Identifying the hazard
2. Profiling each hazard
3. Developing a community profile
4. Comparing and prioritizing each risk
5. Creating and applying scenarios.

# Mitigation Plans

**Hazard Identification** involves putting together a list of hazards that may occur within your jurisdiction. Hazard categories include natural hazards (storms, seismological events), and technological/man-made hazards (power plant incidents, pipeline failures). Cascading emergencies or situations in which one hazard triggers others should also be considered.

**Natural Hazards in Utah**

**Technological Hazards in Utah**

## Mitigation Plans

For each hazard identified as potentially occurring in the community, a hazard profile should be created that includes the following information for each hazard:

**Frequency of Occurrence**
How often is the event likely to occur?

**Magnitude and Potential Intensity**
How bad can it get?

**Location**
Where is it likely to strike?

**Probable Spatial Extent**
How large an are is likely to be affected?

**Duration**
How long can it be expected to last?

**Speed of Onset**
How fast is it likely to occur?

**Seasonal Pattern**
What time of the year is it most likely to occur?

**Availability of Warnings**
How much warning time is there? Does a warning system exist?

## Mitigation Plans

## Hurricane Katrina: Disaster Planning Gone Wrong

On August 23, 2005, Hurricane Katrina hit the US, leaving as the third deadliest hurricane in US history, and the worst in nearly 80 years.

Affecting Louisiana, Mississippi, Alabama, Pennsylvania, Virginia, New Jersey, Tennessee, Ohio, Georgia, West Virginia, Kentucky, Florida, New York, and more, Katrina claimed over 1,800 lives, and cost $125 billion.

## Hurricane Katrina: Disaster Planning Gone Wrong

The place hardest hit by Katrina was undoubtedly New Orleans. The death toll in New Orleans alone was over 1,400, and the hurricane caused $70 billion in damages.

New Orleans rests largely below sea level. In order to protect New Orleans from the Mississippi River and other water hazards, the US Army Corp of Engineers had built a series of levees over the years.

"The Corp of Engineers knew that if New Orleans were to experience a hurricane or flood this situation was likely to happen. The levees were designed for a certain event, and [Katrina] exceeded the design criteria for those levies."

Claude Strauser
Retired Corp Engineer

## Hurricane Katrina: Disaster Planning Gone Wrong

Before Katrina hit, a state of emergency was declared that initiated federal response efforts. Unfortunately, pre-storm deployments went awry.

The government had pre-positioned supplies and troops based on where Katrina was projected to go, but then they had to be redirected to New Orleans.

The logistics of redirecting supplies and aid to New Orleans was compounded by destroyed roads, bridges, or causeways. Other paths were made impenetrable due to fallen trees and storm debris. Additionally, Katrina damaged the emergency communications infrastructure necessary to coordinate an effective response to the disaster.

## Hurricane Katrina: Disaster Planning Gone Wrong

In spite of hundreds of thousands of residents evacuating the area prior to Katrina hitting, tens of thousands remained in the city without shelter, food, and medical care. Additionally, the Superdome arena proved inadequate for dealing with thousands of evacuees.

President Bush called the initial response efforts to Katrina unacceptable, and Congress approved federal aid that exceeded $62 billion.

Following the failures of Katrina, New Orleans accounted for the hard lessons learned from the storm that devastated the city.

# Hurricane Katrina: Disaster Planning Gone Wrong

That another storm rivaling or surpassing Katrina will eventually hit New Orleans is a matter of time. Since 2005, steps have been taken to prevent a repeat event.

This includes $14.5 billion spent on building stronger levees.

An additional $1.1 billion was spent on the Lake Borgne Surge Barrier, measuring 26 feet tall and two miles wide.

The aim of the new system is to guard against storms like Katrina, or worse — those that have a 1% chance of hitting any given year — through 2057. The goal is to modify the system as needed, making it adaptive to conditions New Orleans faces, including rising sea levels, land that sinks as groundwater is pumped from beneath it, and coastal wetlands being destroyed faster than they can be restored.